

Serial Number: 08/77946B

CRF Processing Date: 4/9/93  
 Edited by: ME  
 Verified by: ME (STIC staff)

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: \_\_\_\_\_
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other \_\_\_\_\_
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: \_\_\_\_\_
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: \_\_\_\_\_
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: \_\_\_\_\_
- ☒ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: \_\_\_\_\_
- ☒ Deleted extra, invalid, headings used by an applicant, specifically:  
"TELEAX" - replaced w/ TELEFAX
- ☐ Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file;  
☐ page numbers throughout text; ☐ other invalid text, such as \_\_\_\_\_
- ☐ Inserted mandatory headings, specifically: \_\_\_\_\_
- ☐ Corrected an obvious error in the response, specifically: \_\_\_\_\_
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: \_\_\_\_\_
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted **ending** stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: \_\_\_\_\_
- ☐ Other: \_\_\_\_\_

\*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form. 3/1/95

RAW SEQUENCE LISTING  
PATENT APPLICATION US/08/779,460BDATE: 04/13/98  
TIME: 14:27:45

INPUT SET: S24825.raw

This Raw Listing contains the General  
Information Section and up to the first 8 pages.

## SEQUENCE LISTING

## (1) General Information:

(i) APPLICANT: Oscar Johannes Maria GODDIJN  
Teunis Cornelis VERWOERD  
Ronny Wilhelmus Hermanus Henrika KRUTWAGEN  
Eline VOOGD

(ii) TITLE OF INVENTION: ENHANCED ACCUMULATION OF TREHALOSE  
IN PLANTS

(iii) NUMBER OF SEQUENCES: 27

## (iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: LADAS & PARRY

(B) STREET: 26 WEST 61 STREET

(C) CITY: NEW YORK

(D) STATE: NY

(E) COUNTRY: USA

(F) ZIP: 10023

## (v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: 3-1/4" Disk 1.44 MB

(B) COMPUTER: IBM PC Compatible

(C) OPERATING SYSTEM: Microsoft Windows for Workgroups 3.11

(D) SOFTWARE: WordPerfect 6.1 for Windows

## (vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: 08/779,460

(B) FILING DATE: 07-JAN-1997

INPUT SET: S24825.raw

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(C) CLASSIFICATION: 435

(vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: PY000009/96

(B) FILING DATE: 12-JAN-1996

(viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: MASS, Clifford J.

(B) REGISTRATION NO.: 30,086

(C) REF./DOCKET NO.: U-011098-6

(ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: (212) 708-1890

(B) TELEFAX: (212)- 246-8959

(C) TELEX: 233288

(2) INFORMATION FOR SEQ ID NO: 1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 2621 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA to mRNA

(iii) HYPOTHETICAL: NO

(ix) FEATURE:

(A) NAME/KEY: CDS

(B) LOCATION: 25..2485

(D) OTHER INFORMATION: /function= "trehalose phosph.  
synthase and trehalose phosph. phosphatase"  
/product= "bipartite enzyme"

(ix) FEATURE:

(A) NAME/KEY: unsure

(B) LOCATION: 1609..1611

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

CTGATCCTGC GGTTCATCA CAAT ATG ATA CTC TTA CAT CTG ATG CCC CTT

# RAW SEQUENCE LISTING PATENT APPLICATION US/08/779,460B

DATE: 04/13/98  
TIME: 14:27:48

INPUT SET: S24825.raw

100		Met Ile Leu Leu His Leu Met Pro Leu	
101		1 5	
102			
103	CAG ATG CTC CCA AAT AGG TTG ATT GTC GTA TCG AAT CAG TTA CCC ATA		99
104	Gln Met Leu Pro Asn Arg L u Ile Val Val Ser Asn Gln Leu Pro Ile		
105	10 15 20 25		
106			
107	ATC GCT AGG CTA AGA CTA ACG ACA ATG GAG GGT CCT TTT GGG ATT TCA		147
108	Ile Ala Arg Leu Arg Leu Thr Thr Met Glu Gly Pro Phe Gly Ile Ser		
109	30 35 40		
110			
111	CTT GGG ACG AGA GTT CGA TTT ACA TGC ACA TCA AAG ATG CAT TAC CCG		195
112	Leu Gly Thr Arg Val Arg Phe Thr Cys Thr Ser Lys Met His Tyr Pro		
113	45 50 55		
114			
115	CAG CCG TTG AGG TTT TCT ATT CTT GGC GAT CCA CTA AGG GCT GAC GTT		243
116	Gln Pro Leu Arg Phe Ser Ile Leu Gly Asp Pro Leu Arg Ala Asp Val		
117	60 65 70		
118			
119	GGC CCT ACC GAA CAA GAT GAC GTG TCA AAG ACA TTG CTC GAT AGG TTT		291
120	Gly Pro Thr Glu Gln Asp Asp Val Ser Lys Thr Leu Leu Asp Arg Phe		
121	75 80 85		
122			
123	AAT TGC GTT GCG GTT TTT GTC CCT ACT TCA AAA TGG GAC CAA TAT TAT		339
124	Asn Cys Val Ala Val Phe Val Pro Thr Ser Lys Trp Asp Gln Tyr Tyr		
125	90 95 100 105		
126			
127	CAC TGC TTT TGT AAG CAG TAT TTG TGG CCG ATA TTT CAT TAC AAG GTT		387
128	His Cys Phe Cys Lys Gln Tyr Leu Trp Pro Ile Phe His Tyr Lys Val		
129	110 115 120		
130			
131	CCC GCT TCT GAC GTC AAG AGT GTC CCG AAT AGT CGG GAT TCA TGG AAC		435
132	Pro Ala Ser Asp Val Lys Ser Val Pro Asn Ser Arg Asp Ser Trp Asn		
133	125 130 135		
134			
135	GCT TAT GTT CAC GTG AAC AAA GAG TTT TCC CAG AAG GTG ATG GAG GCA		483
136	Ala Tyr Val His Val Asn Lys Glu Phe Ser Gln Lys Val Met Glu Ala		
137	140 145 150		
138			
139	GTA ACC AAT CGT AGC AAT TAT GTA TGG ATA CAT GAC TAC CAT TTA ATG		531
140	Val Thr Asn Arg Ser Asn Tyr Val Trp Ile His Asp Tyr His Leu Met		
141	155 160 165		
142			
143	ACG CTA CCG ACT TTC TTG AGG CGG GAT TTT TGT CGT TTT AAA ATC GGT		579
144	Thr Leu Pro Thr Phe Leu Arg Arg Asp Phe Cys Arg Phe Lys Ile Gly		
145	170 175 180 185		
146			
147	TTT TTT CTG CAT AGC CCG TTT CCT TCC TCG GAG GTT TAC AAG ACC CTA		627
148	Phe Phe Leu His Ser Pro Phe Pro Ser Ser Glu Val Tyr Lys Thr Leu		
149	190 195 200		
150			
151	CCA ATG AGA AAC GAG CTC TTG AAG GGT CTG TTA AAT GCT GAT CTT ATC		675
152	Pro Met Arg Asn Glu Leu Leu Lys Gly Leu Leu Asn Ala Asp Leu Ile		

# RAW SEQUENCE LISTING PATENT APPLICATION US/08/779,460B

DATE: 04/13/98

TIME: 14:27:49

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	205	210	215	
153				
154				
155	GGG TTC CAT ACA TAC GAT TAT GCC CGT CAT TTT CTA ACG TGT TGT AGT			723
156	Gly Ph His Thr Tyr Asp Tyr Ala Arg His Phe Leu Thr Cys Cys Ser			
157	220	225	230	
158				
159	CGA ATG TTT GGT TTG GAT CAT CAG TTG AAA AGG GGG TAC ATT TTC TTG			771
160	Arg Met Phe Gly Leu Asp His Gln Leu Lys Arg Gly Tyr Ile Phe Leu			
161	235	240	245	
162				
163	GAA TAT AAT GGA AGG AGC ATT GAG ATC AAG ATA AAG GCG AGC GGG ATT			819
164	Glu Tyr Asn Gly Arg Ser Ile Glu Ile Lys Ile Lys Ala Ser Gly Ile			
165	250	255	260	265
166				
167	CAT GTT GGT CGA ATG GAG TCG TAC TTG AGT CAG CCC GAT ACA AGA TTA			867
168	His Val Gly Arg Met Glu Ser Tyr Leu Ser Gln Pro Asp Thr Arg Leu			
169	270	275	280	
170				
171	CAA GTT CAA GAA GTC CAA AAA CGT TCG AAG GAA ATC GTG CTA CTG GGA			915
172	Gln Val Gln Glu Val Gln Lys Arg Ser Lys Glu Ile Val Leu Leu Gly			
173	285	290	295	
174				
175	GTT GAT GAT TTG GAT ATA TTC AAA GGT GTG AAC TTC AAG GTT TTA GCG			963
176	Val Asp Asp Leu Asp Ile Phe Lys Gly Val Asn Phe Lys Val Leu Ala			
177	300	305	310	
178				
179	TTG GAG AAG TTA CTT AAA TCA CAC CCG AGT TGG CAA GGG CGT GTG GAA			1011
180	Leu Glu Lys Leu Leu Lys Ser His Pro Ser Trp Gln Gly Arg Val Glu			
181	315	320	325	
182				
183	AAG GTG CAA ATC TTG AAT CCT CTG CGC CGT TGC CAA GAC GTC GAT GAG			1059
184	Lys Val Gln Ile Leu Asn Pro Leu Arg Arg Cys Gln Asp Val Asp Glu			
185	330	335	340	345
186				
187	ATC AAT GCC GAG ATA AGA ACA GTC TGT GAA AGA ATC AAT AAC GAA CTG			1107
188	Ile Asn Ala Glu Ile Arg Thr Val Cys Glu Arg Ile Asn Asn Glu Leu			
189	350	355	360	
190				
191	GGA AGC CCG GGA TAC CAG CCC GTT GTG TTA ATT GAT GGG CCC GTT TCG			1155
192	Gly Ser Pro Gly Tyr Gln Pro Val Val Leu Ile Asp Gly Pro Val Ser			
193	365	370	375	
194				
195	TTA AGT GAA AAA GCT GCT TAT TAT GCT ATC GCC GAT ATG GCA ATT GTT			1203
196	Leu Ser Glu Lys Ala Ala Tyr Tyr Ala Ile Ala Asp Met Ala Ile Val			
197	380	385	390	
198				
199	ACA CCG TTA CGT GAC GGA CTG AAT CTT ATC CCG TAC GAG TAC GTC GTT			1251
200	Thr Pro Leu Arg Asp Gly Leu Asn Leu Ile Pro Tyr Glu Tyr Val Val			
201	395	400	405	
202				
203	TCC CGA CAA AGT GTT AAT GAC CCA AAT CCC AAT ACT CCA AAA AAG AGC			1299
204	Ser Arg Gln Ser Val Asn Asp Pro Asn Pro Asn Thr Pro Lys Lys Ser			
205	410	415	420	425

**INPUT SET: S24825.raw**

206																		
207	ATG	CTA	GTG	GTC	TCC	GAG	TTC	ATC	GGT	GTT	TCA	CTA	TCT	TTA	ACC	GGG		1347
208	Met	Leu	Val	Val	Ser	Glu	Phe	Ile	Gly	Val	Ser	Leu	Ser	Leu	Thr	Gly		
209					430					435					440			
210																		
211	GCC	ATA	CGG	GTC	AAC	CCA	TGG	GAT	GAG	TTG	GAG	ACA	GCA	GAA	GCA	TTA		1395
212	Ala	Ile	Arg	Val	Asn	Pro	Trp	Asp	Glu	Leu	Glu	Thr	Ala	Glu	Ala	Leu		
213				445					450					455				
214																		
215	TAC	GAC	GCA	CTC	ATG	GCT	CCT	GAT	GAC	CAT	AAA	GAA	ACC	GCC	CAC	ATG		1443
216	Tyr	Asp	Ala	Leu	Met	Ala	Pro	Asp	Asp	His	Lys	Glu	Thr	Ala	His	Met		
217			460					465					470					
218																		
219	AAA	CAG	TAT	CAA	TAC	ATT	ATC	TCC	CAT	GAT	GTA	GCT	AAC	TGG	GCT	AGC		1491
220	Lys	Gln	Tyr	Gln	Tyr	Ile	Ile	Ser	His	Asp	Val	Ala	Asn	Trp	Ala	Ser		
221		475				480						485						
222																		
223	TTC	TTT	CAA	GAT	TTA	GAG	CAA	GCG	TGC	ATC	GAT	CAT	TCT	CGT	AAA	CGA		1539
224	Phe	Phe	Gln	Asp	Leu	Glu	Gln	Ala	Cys	Ile	Asp	His	Ser	Arg	Lys	Arg		
225	490					495				500					505			
226																		
227	TGC	ATG	AAT	TTA	GGA	TTT	GGG	TTA	GAT	ACT	AGA	GTC	GTC	TTT	TTG	ATG		1587
228	Cys	Met	Asn	Leu	Gly	Phe	Gly	Leu	Asp	Thr	Arg	Val	Val	Phe	Leu	Met		
229					510					515					520			
230																		
231	AGA	AGT	TTA	GCA	AGT	TGG	ATA	AAG	ATG	TCT	TGG	AAG	AAT	GCT	TAT	TCC		1635
232	Arg	Ser	Leu	Ala	Ser	Trp	Ile	Lys	Met	Ser	Trp	Lys	Asn	Ala	Tyr	Ser		
233				525					530					535				
234																		
235	ATG	GCT	CAA	AAT	CGG	GCC	ATA	CTT	TTG	GAC	TAT	GAC	GGC	ACT	GTT	ACT		1683
236	Met	Ala	Gln	Asn	Arg	Ala	Ile	Leu	Leu	Asp	Tyr	Asp	Gly	Thr	Val	Thr		
237			540					545					550					
238																		
239	CCA	TCT	ATC	AGT	AAA	TCT	CCA	ACT	GAA	GCT	GTT	ATC	TCC	ATG	ATC	AAC		1731
240	Pro	Ser	Ile	Ser	Lys	Ser	Pro	Thr	Glu	Ala	Val	Ile	Ser	Met	Ile	Asn		
241		555					560					565						
242																		
243	AAA	CTG	TGC	AAT	GAT	CCA	AAG	AAC	ATG	GTG	TTC	ATC	GTT	AGT	GGA	CGC		1779
244	Lys	Leu	Cys	Asn														

**SEQUENCE VERIFICATION REPORT**  
**PATENT APPLICATION    *US/08/779,460B***

DATE: 04/13/98  
TIME: 14:27:54

*INPUT SET: S24825.raw*

Line	Error	Original Text
47	Wrong Classification	(C) CLASSIFICATION:      435